General

Guideline Title

HealthPartners Dental Group and Clinics oral cancer guideline.

Bibliographic Source(s)

HealthPartners Dental Group and Clinics oral cancer guideline. Minneapolis (MN): HealthPartners; 2012 Nov 9. 23 p. [64 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: HealthPartners Dental Group and Clinics oral cancer guideline. Minneapolis (MN): HealthPartners; 2007 May 2. 20 p.

Recommendations

Major Recommendations

Risk Factors Associated With the Development of Oral Cancer

There are many factors associated with an increased risk of developing oral cancer. These include tobacco use, alcohol use, past history of oral-pharyngeal cancer, immunodeficiency, sun exposure, oral infection with human papilloma viruses 16 or 18, family history of first degree relatives with head and neck cancer, and advancing age. There are also synergistic effects among some of these factors.

Oral Cancer Examination

In conducting a visual exam of the oral cavity it is important to be familiar with the spectrum of normal findings so that deviations from normal (like discolorations or lesions) are readily appreciated. Frank squamous cell carcinomas are usually preceded by premalignant surface lesions. Premalignant lesions can be white (leukoplakia), red (erythroplakia), or a combination of white and red (erythroleukoplakia). Although oral mucosal leukoplakia is most often associated with premalignant changes, the red lesions are the ones most likely to demonstrate precancerous or early malignant changes. The latter lesions and red and white lesions carry the greatest risk of becoming carcinomas.

Oral malignant melanomas usually appear as pigmented lesions of the mucosa. Fortunately, these lesions are extremely rare. It is important to be aware of any newly identified and unexplained pigmented lesion or a pre-existing pigmented lesion that recently changed appearance. Certain benign processes can be mistaken for a melanoma. Among such processes are ethnic pigmentations, amalgam tattoos, and drug-induced pigmentations. The gingival and palate are the highest risk areas for intraoral melanoma.

Kaposi's sarcoma (KS) is the most common malignancy associated with acquired immune deficiency syndrome (AIDS). KS is an

angioproliferative disease, representing both an inflammatory hyperplasia and a neoplastic process. The skin is the most common site for this cancer but in about half of those with this disease, an oral lesion is observed.

A complete inspection of the oral and oropharyngeal soft tissues and head and neck lymph nodes should be conducted at each dental hygiene exam appointment. An individual determined to be at risk for oral cancer may require a more frequent recall interval than caries or periodontal risks would dictate. It is important to ask the patient if they have noticed any lumps, bumps, bruises or sores that have not healed or experienced any problems with swallowing. Persistent sore throat, hoarseness, foreign body sensation in the throat and ear pain may also be signs of oropharyngeal cancer.

Components of an Oral Cancer Examination

A good oral examination requires an adequate light source, protective gloves, gauze squares, and a mouth mirror.

1. Extraoral examination
    - Inspect head and neck (including the back of the neck)
    - Bimanually palpate lymph nodes and salivary glands
    - Closely inspect the face (including the external ears) for skin lesions
2. Lips
    - Inspect and palpate outer surfaces of lip and vermillion border
    - Inspect and bidigitally palpate inner labial mucosa (upper and lower)
3. Buccal mucosa
    - Inspect and palpate inner cheek lining
4. Alveolar ridge and gingiva
    - Inspect maxillary/mandibular gingiva and alveolar ridges on both the buccal and lingual sides
5. Tongue
    - Have patient protrude tongue and inspect the dorsal surface
    - Have patient lift tongue and inspect ventral surface
    - Grasping tongue with a piece of gauze and gently pulling it out to each side, inspect the lateral borders of the tongue from its tip back to the lingual tonsil region posteriorly
    - Palpate tongue
6. Floor of mouth
    - Inspect and palpate floor of mouth bimanually
7. Hard palate
    - Inspect and palpate hard palate
    - Palpate for any lumps
8. Soft palate and oropharynx
    - Gently depress the patient's tongue with a mouth mirror, inspect the soft palate, tonsillar pillars, and oropharynx

Screening and Diagnostic Tools for Oral Cancer

Visual examination of the oral soft tissues, extraoral head and neck tissues and palpation of head and neck lymph nodes is considered the standard of care as part of a complete dental examination. The oral and oropharyngeal tissues lend themselves to visual inspection. One estimate suggests 5% to 10% of routine dental patients have some unusual findings in the oral cavity. Most such findings are benign and reactive in nature, but more rarely a more serious condition like squamous cell carcinoma is detected. A thorough and detailed visual exam along with palpation of tissues is the first step in identifying variations from normal and making an assessment of which conditions pose no threat from those that may lead to more serious consequences.

The biopsy is the gold standard for diagnosing oral cancers. A representative tissue sample obtained surgically and submitted for histopathological examination is the most definitive means of diagnosing oral cancer. A number of screening tools are either commercially available or in development or preparation for distribution. These products purportedly offer help in distinguishing which oral lesions should be biopsied. However, none of them can be relied on to establish definitive diagnoses.

Toluidine blue is a metachromatic dye that has been used for over 40 years to stain tissues suspected of being neoplastic. Toluidine blue stains mitochondrial deoxyribonucleic acid (DNA) and cells with greater than normal DNA or altered DNA. It has been found to be useful in selecting sites for biopsy.

ViziLite is a relatively new product developed for evaluating and monitoring oral mucosa abnormalities in populations at increased risk for oral cancer. Acetic acid is applied throughout the mouth and then the tissues are viewed using a special light. In some anatomic regions other than the

oral cavity, precancerous lesions appear very opaque-white under this special light. This diagnostic technique has been used successfully in gynecology and is called a colposcopy. However, further study is needed to determine what role, if any, this test should play in screening for oral cancer. This product may be of benefit in following patients who have been diagnosed with dysplasia due to its relatively low rate of false negatives.

The brush "biopsy", an exfoliative cytologic technique was developed as a means of harvesting a transepithelial sample of cells from an oral surface lesion without having to anesthetize and remove an actual tissue sample (i.e., biopsy specimen) with the scalpel. This, too, is simply a screening tool similar to one that has been used in gynecology for a number of years and is known as a Papanicolaou ("Pap") smear. Many dysplastic lesions are first identified by histopathologically evident changes in the morphology of cells in the epithelial basal cell layer. Therefore, in order to be of use, the brush must obtain cells from this layer. This test can be used as a preliminary tool in helping to confirm a clinician's suspicion regarding an oral lesion. It must be emphasized that a brush "biopsy" sample analysis does not and cannot provide a definitive diagnosis for oral cancer. A tissue biopsy must be obtained to confirm the diagnosis.

Once a diagnosis of oral cancer has been made, imaging studies may be undertaken to determine the extent of the disease. Current imaging techniques include computed tomography (CT) scan, magnetic resonance imaging (MRI), and positron emission tomography (PET). Ultrasonography may also be useful.

Clinical Algorithm(s)

A flow chart of a soft tissue exam is provided in the original guideline document.

Scope

Disease/Condition(s)

Oral cancer, including squamous cell carcinoma, melanoma, metastatic neoplasm, Kaposi's sarcoma, and other oral cancers

Note: This guideline deals with the integument of the lips, oral cavity proper and oral pharynx. It does not address salivary glands or connective tissues.

Guideline Category

Diagnosis

Evaluation

Risk Assessment

Screening

Clinical Specialty

Dentistry

Oncology

Intended Users

Dentists

Guideline Objective(s)

To provide a model to assess an individual patient's risk for developing an oral cancer and to recommend tools to identify oral cancers earlier in the course of the disease

Target Population

Children and adults in the HealthPartners patient population

Interventions and Practices Considered

1. Risk assessment for oral cancer, including assessment of:
    - Tobacco use
    - Alcohol use
    - History of oral cancer
    - Immunodeficiency
    - Sun exposure
    - Age
2. Oral cancer examination, including:
    - Visual examination of oral and oropharyngeal soft tissues
    - Visual examination of extraoral head and neck tissues
    - Palpation of head and neck lymph nodes
3. Oral soft tissue biopsy
4. Screening tools such as toluidine blue dye, ViziLite, and brush biopsy
5. Imaging techniques such as computed tomography, magnetic resonance imaging, positron emission tomography, and ultrasonography

Major Outcomes Considered

- Risk for developing oral cancer
- Utility of screening tools for oral cancer

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

PubMed and Cochrane Library of Systematic Reviews databases were searched for clinical trials, systematic reviews, and meta-analyses from 2006 through 2011. Genetic studies that fit the search criteria were also included. The following search terms were used: mouth neoplasms; mouth neoplasms, etiology; risk assessment; tobacco; alcohol; diet; human papillomavirus or HPV; age; sun; betel; radiation therapy; radiation; cancer therapy; dentures; partials; dental implants; oral cancer devices; immunodeficiency.

Number of Source Documents

26 articles were reviewed.

Methods Used to Assess the Quality and Strength of the Evidence

Not stated

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Review

Review of Published Meta-Analyses

Description of the Methods Used to Analyze the Evidence

Committee discussion of articles

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

The committee updating the guideline formulated the recommendations based on the articles reviewed. The draft document was also reviewed by outside experts.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

The guideline developers reviewed published cost analyses.

Method of Guideline Validation

External Peer Review

Description of Method of Guideline Validation

The draft document was reviewed by outside experts. Recommended changes were incorporated into the draft prior to submission to the National Guideline Clearinghouse (NGC).

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence supporting the recommendations is not specifically stated.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Improved assessment and early identification of oral cancers

Potential Harms

Not stated

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Audit Criteria/Indicators

Chart Documentation/Checklists/Forms

Clinical Algorithm

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2007 May 2 (revised 2012 Nov 9)

Guideline Developer(s)

HealthPartners Dental Group - Professional Association

Source(s) of Funding

HealthPartners Dental Group

Guideline Committee

Not stated

Composition of Group That Authored the Guideline

Not stated

Financial Disclosures/Conflicts of Interest

Not stated

Guideline Status

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Guideline Availability

Electronic copies: None available

Print copies: Available from HealthPartners, 8170 33rd Avenue South, P.O. Box 1309, Minneapolis, MN 55440-1309; Phone: (952) 883-5151; Web site: http://www.healthpartners.com

Availability of Companion Documents

Potential measures, an EDR risk assessment form, and a sample oral cancer consultation form are provided in the original guideline document.

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on August 8, 2007. The information was verified by the guideline developer on August 28,

2007. This NGC summary was updated by ECRI Institute on February 1, 2013. The updated information was verified by the guideline developer on February 6, 2013.

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